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Steve Leslie Pope

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09/17/2009

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EXAMINER

GOODCHILD, WILLIAM J

ART UNIT

PAPER NUMBER

2445

NOTIFICATION DATE

DELIVERY MODE

09/17/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-PAT-Email@rfem.com

DETAILED ACTION

Specification

1. The disclosure is objected to because it contains an embedded hyperlink and/or other form of browser-executable code. Applicant is required to delete the embedded hyperlink and/or other form of browser-executable code. See MPEP § 608.01.

See instant specification, paragraph 23, www.vidf.org and paragraph 31, www.vesa.org.

Information Disclosure Statement

2. The information disclosure statement filed 03/18/2009, item 139 fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the information referred to therein has not been considered.

Item 139 is either not been supplied, or does not list the names of the papers that it represents, as there is not a document supplied labeled "Various presentations given at HOTI'06".

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 7-9, 14-17 and 39-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terrell et al., (US Publication No. 2002/0124108), (hereinafter Terrell), and further in view of Andjelic, (US Patent No. 7,451,456) and Blumrich et al., (US Patent No. 7,555,566), (hereinafter Blumrich).

Regarding claim 1, Terrell discloses a communication interface for providing an interface between a data link and a data processor, the data processor being capable of supporting an operating system and a user application [Terrell, paragraphs 6-12], the communication interface being arranged to:

analyze data received over the link and identified as being directed to the operating system or the data port to determine whether that data meets one or more predefined criteria, and if it does meet the criteria transmit an interrupt to the operating system [Terrell, paragraphs 31, lines 18-24].

Terrell does not specifically disclose apply to a first queue, said first queue being located in the address space of a user application, data received over the link and

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identified as being directed to a particular logical data port associated with that application;

apply to a second queue located in the address space of the operating system out-of-band data received over the link for the particular logical data port and identified as being directed to the operating system, the second queue being memory mapped into the address space of the user application.

However, Andjelic, in the same field of endeavor discloses applying to a first queue [Andjelic, column 6, lines 44-49], located in the address space of a user application [Andjelic, column 5, lines 10-15], data directed to a particular logical data port associated with that application [Andjelic, column 3, lines 11-14 and column 4, lines 5-9] and applying to a second queue [Andjelic, column 6, lines 44-49] in the address space of the operating system over the data port [Andjelic, column 6, lines 44-49, column 5, lines 10-15 and column 4, lines 5-9].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include multiple queues over a particular data port within the address space of a user application or memory mapped to the application in order to provide for increased speed between the data link and the data processor.

Blumrich, in the same field of endeavor discloses out-of-band data [column 24, lines 11-15].

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to include out of band data in order to provide data to the OS.

Regarding claim 7, Terrell further discloses wherein one of the predefined criteria is such that if the data received over the link matches one or more predetermined message forms then the communication interface will transmit an interrupt to the operating system [Terrell, paragraph 31].

Regarding claim 8, Terrell further discloses wherein the communication interface is arranged to, if the data meets one or more of the predefined criteria and one or more additional criteria, transmit an interrupt to the operating system and transmit a message to the operating system indicating a port to which the data was addressed [Terrell, paragraph 31].

Regarding claim 9, Terrell further discloses wherein the additional criteria are indicative of an error condition [Terrell, paragraph 31].

Regarding claim 14, Terrell further discloses wherein the communication interface is arranged to analyse the content of each data unit received over the link and to determine in dependence on the content of that data unit which of the said queues to apply the data unit to [Terrell, paragraphs 31 and 61-62].

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Regarding claim 15, Terrell further discloses wherein the communication interface is configurable by the operating system to set the said criteria [Terrell, paragraphs 60-62].

Regarding claim 16, Terrell further discloses wherein one or both of the communication interface and the operating system is responsive to a message of a predetermined type to return a message including information indicative of the status of the port [Terrell, paragraphs 31 and 60-62].

Regarding claim 17, Terrell further discloses the data processor being arranged to, when the processing of an application with which a data port is associated is suspended, set the criteria such that the communication interface will transmit an interrupt to the operating system on receiving data identified as being directed to that data port [Terrell, paragraphs 31 and 60-62].

Regarding claim 39, Terrell further discloses a communication interface as claimed in claim 1 [Terrell, paragraphs 6-12].

Regarding claim 40, Terrell further discloses a communication system as claimed in claim 17 [Terrell, paragraphs 6-12].

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5. Claims 10-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Terrell-Andjelic-Blumrich as applied to claim 1 above, and further in view of Roberts et al., (International Publication No. WO 00/67131), (hereinafter Roberts).

Regarding claim 10, Terrell further discloses wherein the communication interface is arranged to support a third queue of data received over the link and addressed to a logical data port associated with a user application [Terrell, paragraphs 6-7 and 31]. Terrell does not specifically disclose and is arranged to apply to the first queue data units received over the link and of a form having a fixed length and to apply to the third queue data units received over the link and of a form having a variable length.

However, Roberts in the same field of endeavor discloses fixed and variable length packets [Roberts, page 22, 2nd paragraph or lines 3-17].

It would have been obvious to one having ordinary skill in the art at the time the invention was made to include variable length packets with fixed length packets in order to allow packets to pass through the network without delays.

Regarding claim 11, Terrell-Roberts further discloses wherein the data units of a fixed size include messages received over the link and interpreted by the communication interface as indicating an error status [Terrell, paragraph 31].

Regarding claim 12, Terrell-Roberts further discloses wherein the data units of a fixed size include messages received over the link and interpreted by the communication

interface as indicating a request for or acknowledgement of set-up of a connection [Terrell, paragraphs 6-7].

Regarding claim 13, Terrell-Roberts further discloses wherein the data units of a fixed size include messages received over the link and interpreted by the communication interface as indicating a data delivery event [Terrell, paragraphs 6-8].

Response to Arguments

6. Applicant's arguments with respect to claims 1, 7-17 and 39-40 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Examiner's Note: Examiner has cited particular paragraphs / columns and line numbers in the reference(s) applied to the claims above for the convenience of the applicant.

Although the specified citations are representative of the teachings of the art and are applied to specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the cited passages as taught by the prior art or relied upon by the examiner.

Should applicant amend the claims of the claimed invention, it is respectfully requested that applicant clearly indicate the portion(s) of applicant's specification that support the amended claim language for ascertaining the metes and bounds of applicant's claimed invention

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WILLIAM J. GOODCHILD whose telephone number is (571)270-1589. The examiner can normally be reached on Monday - Friday / 8:00 AM - 4:00 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivek Srivastava can be reached on (571) 272-7304. The fax phone

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number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

WJG
09/14/2009

/VIVEK SRIVASTAVA/
Supervisory Patent Examiner, Art Unit 2445